

Message

From: Whittier, Robert [Robert.Whittier@doh.hawaii.gov]
Sent: 5/1/2018 10:22:59 PM
To: TU, LYNDSEY [Tu.Lyndsey@epa.gov]; Grange, Gabrielle Fenix [Gabrielle.Grange@doh.hawaii.gov]; G D Beckett [g.d.beckett@aquiver.com]; Matt Tonkin [matt@sspa.com]; Donald Thomas [dthomas@soest.hawaii.edu]
Subject: Re: Navy Digital Data Download

Hi All,

I have a Doctor appointment Friday AM and a cesspool meeting after that. So my Friday is taken. However, I can jot down some thoughts for discussion as I did with the last GW Modeling Working Group Meeting. My thoughts parallel GDs in that there seems to be a disconnect between the conclusions were are presented with, and what the data say and any realistic interpretation of the data.

Thanks,
Bob W.

From: TU, LYNDSEY <Tu.Lyndsey@epa.gov>
Sent: Tuesday, May 1, 2018 11:55:34 AM
To: Grange, Gabrielle Fenix; G D Beckett; Matt Tonkin; Whittier, Robert; Donald Thomas
Subject: RE: Navy Digital Data Download

Hi Fenix, I think that 10am in Hawaii is 3pm central- unfortunately outside of Matt's availability. Are you and others in Hawaii available at 9am or perhaps earlier?

From: Grange, Gabrielle Fenix [mailto:Gabrielle.Grange@doh.hawaii.gov]
Sent: Tuesday, May 01, 2018 2:53 PM
To: TU, LYNDSEY <Tu.Lyndsey@epa.gov>; G D Beckett <g.d.beckett@aquiver.com>; Matt Tonkin <matt@sspa.com>; Whittier, Robert <Robert.Whittier@doh.hawaii.gov>; Donald Thomas <dthomas@soest.hawaii.edu>
Subject: Re: Navy Digital Data Download

Friday I'm available 10:30 am-noon which should work within Matt's window. Will that still work for you, G D?

Bob, Don,
Will this work for you as well?

Fenix Grange
Program Manager
Hazard Evaluation Emergency Response Office
808-586-4248

From: G D Beckett <g.d.beckett@aquiver.com>
Sent: Tuesday, May 1, 2018 11:23 AM
Subject: RE: Navy Digital Data Download
To: TU, LYNDSEY <tu.lyndsey@epa.gov>, Donald Thomas <dthomas@soest.hawaii.edu>, Grange, Gabrielle Fenix <gabrielle.grange@doh.hawaii.gov>, Whittier, Robert <robert.whittier@doh.hawaii.gov>, <matt@sspa.com>

Thanks Matt. Friday can work for me as well, morning is best.

>>> Matt Tonkin<matt@sspa.com> 5/1/2018 2:34 PM >>>

Friday sounds good. I am wide open until 3:00 central – would it be possible before then?

Matthew J. Tonkin

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From: TU, LYNDSEY [<mailto:TU.Lyndsey@epa.gov>]

Sent: Tuesday, May 1, 2018 3:02 PM

To: G D Beckett <g.d.beckett@aquiver.com>; Donald Thomas <dthomas@soest.hawaii.edu>; Grange Gabrielle Fenix <Gabrielle.Grange@doh.hawaii.gov>; Matt Tonkin <matt@sspa.com>; Whittier Robert <Robert.Whittier@doh.hawaii.gov>

Subject: RE: Navy Digital Data Download

Hi All

Thanks for your thoughts Gary. I agree that we should try to have a call to discuss priorities and path forward given both what we saw and the additional data we expect to receive shortly. This week is preferred for me as I will be in a training all of next week. Does Friday work for everyone? I can make any time work so just let me know your availability for that day if you have any.

Best,

Lyndsey Tu

Underground Storage Tanks Program

Land Division, U.S. EPA Pacific Southwest

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From: G D Beckett [<mailto:g.d.beckett@aquiver.com>]

Sent: Tuesday, May 01, 2018 11:39 AM

To: Donald Thomas <dthomas@soest.hawaii.edu>; Grange Gabrielle Fenix <Gabrielle.Grange@doh.hawaii.gov>; Matt Tonkin <matt@sspa.com>; TU, LYNDSEY <TU.Lyndsey@epa.gov>; Whittier Robert <Robert.Whittier@doh.hawaii.gov>

Subject: Re: Navy Digital Data Download

Hello folks,

So, as a followup to this string & Lyndsey's earlier questions about where LNAPL might go, did we learn a lot new yesterday? There were some modifications to the LNAPL approach, but it still relies on non-dynamic evaluations that cannot answer the question of "where will LNAPL releases of varying sizes potentially migrate, how fast, and can they be captured by pumping at Red Hill?"

We did finally get two revelations that we'll need to think about. First, regardless of concentration values, the Navy admits Red Hill shaft has been impacted by past releases, whether including 2014 or not. Similarly, they did not exclude data from other well locations, they just basically said value ranges can be large. We have already talked about QC of the

older data sets and perhaps can come to some decisions on that. As we've discussed, if any of the distal detections are "real", regardless of value, that says a lot about the transport system and the mass already in-place. The second facet was the half-life of 7-days. That's an aggressive half-life, which means (if valid) that the transport distance will be smaller than normal ranges (30 - 60 days) and concentrations will dissipate quickly. In turn that directly implies LNAPL source materials are further afield from the tank farm than the Navy has considered.

With these new pieces of information, I'll be able to do some screening transport assessments similar to the break-through evaluation I did previously. Again, these are not to prove a conclusive scenario, but rather to note that there are several plausible scenarios that the Navy is not considering. Similarly, the new information implies that if Chucik's analysis is correct, there may already be an LNAPL mass of the order he suggests as protective in order for there to be impacts at the RH shaft. I realize he is using a risk-based value there, but the analogy still holds. Nothing I saw considers the mass that must be in place for distal impacts to have occurred.

I would like to suggest we all have a call next week sometime to discuss the path fwd on our own evaluations so we can progress past the current stasis where the Navy gives us lots of words/slides but no ability to independently consider what they have done (although that is changing with data delivery).

Best regards

G.D. Beckett, RG, CHg

Principal Hydrogeologist

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>>> G D Beckett (g.d.beckett@aquiver.com) 4/24/2018 9:00 AM >>>

Hi folks,

With this fresh data start with the Navy, we now may want to think about organization & tasks to reduce redundancies. Per EPA/DOH's data request letter to the Navy, it would help us to have the data placed into a relational database in a common format that everyone can access (no pun). Matt, as the author of the technical parts of that letter, may be the best suited of us to do that? For myself, I use MS Access a lot for relatively small data sets such as this, and I'll admit to a resistance to buying new licenses for software that hasn't improved (Microsoft being a key example). I am version 2010 compatible with Office tools, but can upgrade if necessary.

It also may be useful to think about our specific task list in both using these data to confirm aspects of the F&T approaches, and other related tasks quantifying other F&T scenarios that might be more conservative while still remaining consistent with the data provided and the overall geologic knowledge of Don & Bob.

Lastly, I have been cursed with a litigation extension. That might sound good, but the new deadline means new tuning, etc. I will be more available than over the last few weeks, but still limited until May 3rd.

Best regards.

>>> G D Beckett (g.d.beckett@aquiver.com) 4/20/2018 10:54 AM >>>

Hello Fenix & Lyndsey,

Matt & I spoke about this upcoming meeting in context with what we heard on the data call earlier this week (and other calls). It sounds like the Navy team is doing some sort of data validation for groundwater samples, presumably those with low detections and TPH polars. It would be useful for us to have an overview independent QC of those data sets. That would include a look at the frequency of trip blank & other blind detections as compared to the frequency of low-level detections. It would also benefit from GC reviews for key samples of interest, and some other basic QA/QC with the source laboratories. I suspect these capable labs would defend their data as reported in most cases. AECOM has

plenty of Navy experience, and there should already be a QA/QC process in-place and if reported values are in question, those should have been pointed out in the original reporting of results.

Anyway, rather than being in yet another reactive position for the next call, I recommend Matt & his folks do an overview QA/QC of the groundwater DB, particularly as it should be delivered by COB today, if I heard the Navy team correctly on Tuesday's call. As we've all discussed, we have an unusual condition where the absence of reasonably dense characterization (both location & calendar) that we have at typical sites allows for a wide range of assumptions and interpretations. Within that range, the Navy should be looking at conservative end-members; I'm not sure that is happening.

Best regards.

G.D. Beckett, RG, CHg

Principal Hydrogeologist

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>>> TU, LYNDSEY<Tu.Lyndsey@epa.gov> 4/9/2018 9:19 AM >>>

Hi all,

Please let me know if 10 -1 Hawaii time on April 30th works for a technical meeting with the Navy. Iliana is unavailable for the date's we previously discussed.

Thanks,

Lyndsey Tu

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